IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of	:	Docket No.: OT-4607
Y. Tsukahara et al.	:	Date: May 13, 2005
Appln. No.: 10/070,712	:	Group Art Unit: 3651
Filing Date: March 5, 2002	:	Examiner: Gene O. Crawford

Title: STEP FOR ESCALATOR

I hereby certify this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents Alexandria, VA 22313-1450 on:

Signature

5-13-05
Date

Mail Stop Appeal Brief- Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

APPEAL TO THE BOARD OF PATENT APPEALS AND INTERFERENCES PURSUANT TO 37 C.F.R. §41.31

1. REAL PARTY IN INTEREST

The real party in interest is Otis Elevator Company. The assignment of assignor's interest was recorded on March 5, 2002 at reel 012898, frame 0265.

2. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences known to appellants, the appellants' legal representative, or assignee that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

3. STATUS OF CLAIMS

Claims 1-6 are pending in the application.

Claim 1 is allowed.

Claims 2-4 stand rejected.

Claims 5 and 6 stand objected to.

The rejection of claims 2-4 is appealed.

4. STATUS OF AMENDMENTS

No amendments were filed subsequent to the final rejection.

5. SUMMARY OF CLAIMED SUBJECT MATTER

Claim 2 is the sole independent claim that is subject to this appeal.

Claim 2 recites an escalator step including a tread and a riser, the riser extending downward from a rear edge of the step. A non-slip surface of a fixed length and a prescribed width is mounted to the rear edge of the step.

The claimed features regarding a non-slip surface are discussed throughout the specification, for example at page 3, lines 25-27; page 4, line 26 – page 5, line 2; page 6, lines 12-18; page 2, lines 12-16; and in Figs. 1, 2 and 7-9B (see reference number 7).

6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

(a) Claims 2 and 3 stand rejected under §103(a) as allegedly being unpatentable over Fischer in view of Ahls et al.

(b) Claim 4 stands rejected under §103(a) as allegedly being unpatentable over Fischer in view of Ahls et al., and further in view of Saito et al.

7. ARGUMENT(S)

When an application is submitted to the Patent and Trademark Office (PTO), case law dictates that §103 places the burden of proof on the PTO to establish a prima facie case of obviousness.[1] Once the prima facie case has been established, then the burden of going forward with the evidence to rebut the prima facie case shifts to the applicant. Only the burden of going forward with evidence to rebut shifts to the applicant, however. The burden of persuasion remains with the PTO.

In this instance, a prima facie case would necessarily have to first establish that the present invention would be obvious in view of the cited prior art. In order to support a prima facie obviousness type rejection, the Examiner must take into account all the limitations in the rejected claim,[2] including any limitations expressed using functional language.[3] Further, the obviousness must be determined based on the claimed subject matter as a whole, including any results and advantages produced by the claimed subject matter.[4] Further, to establish a prima facie case of obviousness, there must be some teaching, suggestion or incentive to support the specific combination of references.[5]

(a) Rejection of Claims 2 and 3 under §103(a) over Fischer in view of Ahls et al.

According to the Final Rejection, claim 1 would have been obvious under §103 over Fischer in view of Ahls et al.

Fischer discloses an escalator step that includes a nosing (3, 40) mounted to its rear edge. Applicants understand the purpose of the nosing of Fischer to be to permit replacement of the step edge in some cases (see column 1, lines 35-42 and 45-48). In one embodiment (see column 2, line 66), the nosing can also serve the function of a warning strip.

---

[1] In re Fritch, 23 U.S.P.Q. 2d. 1780 (Fed. Cir. 1992), In re Piasecki, 745 F.2d. 1468, 1471-1472, 223 U.S.P.Q. 785, 787-788 (Fed. Cir. 1984).

[2] Carl Schenck, A.G. v. Nortron Corp., 713 F.2d 782, 218 U.S.P.Q. 698 (Fed. Cir. 1983); Carman Industries v. Wahl, 724 F.2d 932, 220 U.S.P.Q. 481 (Fed. Cir. 1983).

[3] Lewmar Marine, 827 F.2d 744, 3 U.S.P.Q.2d 592.

[4] Diversitech Corp. v. Century Steps, Inc., 850 F.2d 675, 7 U.S.P.Q.2d 1315 (Fed. Cir. 1988); In re Chupp, 816 F.2d 643, 2 U.S.P.Q.2d 1437 (Fed. Cir. 1987); Fromson v. Advanced Offset Plate, 755 F.2d 1549, 225 U.S.P.Q. 26 (Fed. Cir. 1985).

[5] In re Geiger, 815 F.2d 686, 2 U.S.P.Q.2d 1276 (Fed. Cir. 1987); ACS Hospital Systems Inc. v. Montefiore Hospital, 732 Fed.2d 1572, 221 U.S.P.Q. 929 (Fed. Cir. 1984).

As noted in the Final Rejection, Fischer does not disclose that the nosing is non-slip. Rather, Fischer discloses that the nosing is formed of a "substantially rigid, but slightly resilient, plastic" (column 5, lines 53-54) with nothing to suggest that the plastic has non-slip characteristics.

Ahls et al. discloses providing a wear-resistant coating 34 to the edges of an escalator step to address the problem of providing "a durable means for alerting passengers ... which is easily recognizable" (col. 1, lines 60-63). Ahls et al. discloses that the wear resistant coating is a plasticized PVC, and that "other polymers, elastomers, or rubber products, may be used alternatively." (Col. 3, lines 5-8.)

According to the Final Rejection, rubber is notoriously well known for its high coefficient of friction. Further according to the Final Rejection, Ahls et al. discloses providing a non-slip surface made of rubber to the edges of an escalator step including the rear edge, and it would have been obvious "to provide the synthetic resin surface of the step disclosed by Fischer be made of rubber such requiring the mere choice of an art recognized material used for making surfaces that can be attached to the rear edge of an escalator step as taught by Ahls et al."

Applicants respectfully disagree.

Appellants respectfully submit that the combination of Fischer in view of Ahls et al. is not proper. Further, even if combined, Appellants respectfully submit that the combination would not have included all of the features recited in the independent claim.

(i) The asserted combination does not disclose all of the features recited in independent claim 2.

Initially, Applicants note that Ahls et al. mentions "rubber products" as an alternative to plasticized PVC for the wear resistant coating. Applicants find no reference in Ahls et al. to using rubber *per se*. Therefore, Applicants submit that the rejection, insofar as it relies on allegedly notorious properties of rubber, is not proper.

Further, Applicants traverse the assertion in the Final Rejection that rubber is (or more appropriately, rubber products are) notoriously well known for high coefficient of friction. While it may be true that some rubber products do exhibit high frictional characteristics, rubber

products (as well as the other materials listed in Ahls et al.) can exhibit a very broad range of coefficients of friction depending on specific composition, surface treatments, additives, etc.

Additionally, Applicants submit that it would not be proper to assume that the materials mentioned in Ahls et al. are high-friction, nor would it be proper to conclude that one of skill in the art would substitute a high-friction material for the nosing of Fischer based on the teachings of Ahls et al., especially when Ahls et al. discloses no concern with frictional properties, but rather focuses on wear resistance and visibility. There is no objective reason to conclude either that the rubber products mentioned in Ahls et al. have non-slip characteristics or that the disclosure of Ahls et al. would suggest using a material that does have non-slip characteristics.

In the Advisory Action mailed December 2, 2004, it is asserted that the materials disclosed in Ahls et al. "have variations that do contain nonslip characteristics" and that Ahls et al. "does not exclude the nonslip variations ... hence they are among the groups that are capable of being used." However, as noted, the listed materials can exhibit a very broad range of coefficients of friction. There is no recognition in Ahls et al. of the desirability of utilizing a "nonslip variation" of the materials that are disclosed (as noted, wear resistance and visibility are the express focus). Without such a motivating factor, there would have been no objective reason to select the "nonslip variations." Thus, it would not have been obvious from the disclosure of Ahls et al. to so restrict the material selection.[6]

(ii) The asserted combination is not proper.

Still further, Applicants understand that the purpose of the nosing of Fischer is to permit replacement of the step edge in some cases (see col. 1, lines 35-42 and 45-48). Use of the wear resistant coating of Ahls et al., which is bonded to the tread surface using a dipping process (col. 3, lines 9-30), is completely inconsistent the foregoing purpose of the nosing in Fischer. On the other hand, there is no suggestion that the coating materials Ahls et al. would be suitable for use in the mounted nosing of Fischer. Therefore, one of skill in the art would not be disposed on any objective basis to combine the teachings of Ahls et al. and Fischer in the asserted manner.

In fact, Fischer and Ahls et al. each appears to teach away from such a combination. Fischer specifically teaches away from unitary steps in which the ribbing on the outside edges of

[6] In re Geiger, 815 F.2d 686, 2 U.S.P.Q.2d 1276; ACS Hospital Systems Inc, 732 Fed.2d 1572, 221 U.S.P.Q. 929.

the tread surface are formed along with the remaining step (col. 1, lines 35-42), whereas Ahls et al. specifically teaches away from using plastic inserts secured to steps (col. 1, lines 48-59). This is further indication that one of skill in the art would not be disposed on any objective basis to combine the teachings of Ahls et al. and Fischer in the asserted manner.

Since neither Fischer nor Ahls et al., whether considered independently or in combination, discloses or suggests all of the features that are recited in claim 2, Applicants request reversal of this rejection.

(iii) Claim 3.

Claim 3 recites that the non-slip surface is comprised of a synthetic resin body and is formed with cleats conforming to the step tread. As noted, Ahls et al. specifically teaches away from using plastic inserts secured to steps (col. 1, lines 48-59). This is further indication that one of skill in the art would not be disposed on any objective basis to apply the teachings of Ahls et al. to arrive at the claimed invention.

Since neither Fischer nor Ahls et al., whether considered independently or in combination, discloses or suggests all of the features that are recited in claim 3, Applicants request reversal of this rejection.

(b) Rejection of Claim 4 under §103(a) over Fischer in view of Ahls et al., and further in view of Saito et al.

According to the Final Rejection, claim 4 would have been obvious over Fischer in view of Ahls et al., and further in view of Saito et al.

Claim 4 recites a serrated irregular part formed on the top surface of the cleats of the non-slip surface of the step recited in claims 2 or 3.

Initially, Saito et al. does not overcome the above-noted deficiencies in the disclosures Fischer and Ahls et al. Further, for the same reasons discussed above in connection with the rejection of claim 1, Appellants respectfully submit that the combination of Fischer in view of Ahls et al. is not proper.

Saito et al. discloses forming the top portions of the cleats of the step tread with corrugated metal. There is no suggestion of providing a serrated irregular part on the surface.

Further, even ignoring the distinction between serrated irregular and corrugated, there is no recognition of providing such corrugated metal to a non-slip surface that is mounted to the rear edge of the step. Rather, the corrugations are provided to the entire tread surface.

Finally, there is no suggestion that the corrugated metal surfaces of Saito et al. be applied to the non-metallic surfaces that are relied upon in Fischer and Ahls et al.

Since none of Fischer, Ahls et al., or Saito et al., whether considered independently or in combination, discloses or suggests all of the features that are recited in claim 4, Applicants request reversal of this rejection.

Conclusion

As appellants have traversed each and every rejection raised in the Final Rejection, it is respectfully requested that the rejections be reversed and the rejected claims be passed to issue, along with the claims that presently are allowed and/or objected to.

Payment of the necessary fee is by credit card. Form PTO-2038 is attached. Please charge any additional fees or credit any overpayment to Deposit Account No. 15-0750, Order No. OT-4607.

Respectfully submitted,

By 

Sean W. O'Brien
Registration No. 37,689

Otis Elevator Company
Otis Intellectual Property Department
10 Farm Springs
Farmington, CT 06032
(860) 676-5760

8. CLAIMS APPENDIX

1. An escalator step including a tread and a riser, the riser extending downward from a rear edge of the step, the riser including a toothed surface made of cleats with one or more grooves formed in the longitudinal direction on the surface of each of the cleats.

2. An escalator step including a tread and a riser, the riser extending downward from a rear edge of the step, the step including a non-slip surface of a fixed length and a prescribed width mounted to the rear edge of the step.

3. An escalator step according to Claim 2, wherein the non-slip surface is comprised of a synthetic resin body of a fixed length and approximately the same width as a prescribed demarcation width to be applied at the periphery of the step and is formed with cleats conforming to the step tread.

4. The escalator step according to Claim 2 or 3, further including a serrated irregular part formed on the top surface of the cleats of the non-slip surface.

5. The escalator step according to Claims 2 or 3, wherein the height of the cleats of the non-slip surface are formed to be higher than the tread.

6. The escalator step according to Claims 2 or 3, wherein the non-slip surface is fastened to a reinforcing plate which is fixed within a cleat cutout part of the step.

9. EVIDENCE APPENDIX.

There is no evidence submitted pursuant to §§ 1.130, 1.131, or 1.132 of this title or of any other evidence entered by the examiner and relied upon by appellant in the appeal.

10. RELATED PROCEEDINGS APPENDIX.

There are no proceeding to be listed pursuant to paragraph (c)(1)(ii).